

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 January 2002 (31.01.2002)

PCT

(10) International Publication Number
WO 02/08687 A1

(51) International Patent Classification: G01B 3/10

(21) International Application Number: PCT/US01/22016

(22) International Filing Date: 13 July 2001 (13.07.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/220,500 25 July 2000 (25.07.2000) US
09/880,468 13 June 2001 (13.06.2001) US

(71) Applicant and

(72) Inventor: SMITH, Braden, L. [US/US]; 3732 Kimberly Drive, Lafayette, IN 47905 (US).

(74) Agent: KLINGER, Robert, C.; Jackson Walker L.L.P., 2435 N. Central Expressway, Suite 600, Richardson, TX 75080 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, ZW.

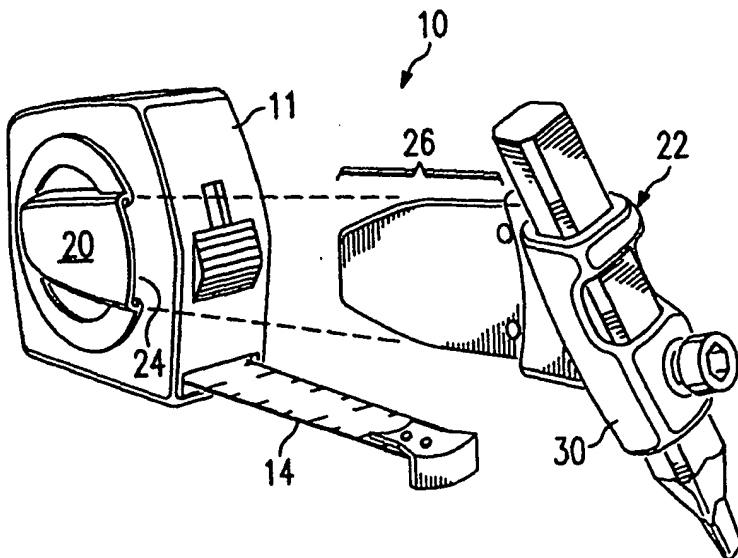
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RELEASABLE MARKING ATTACHMENT FOR TAPE MEASURE



(57) Abstract: An integrated recoiling tape measure with an integral marker secured thereto by a marker holder. The marker holder is uniquely designed to be attached to the side of the tape measure, and is angled in a first direction such that the pencil tip extends forward to the tape holder, and is also angled laterally inward toward the tape itself and proximate the graduations thereof for easy and convenient marking of the material proximate the tape graduations. The present invention achieves technical advantages by allowing a workman to measure and mark a material with one hand, thus freeing the other hand for holding the material or other tools.

WO 02/08687 A1

RELEASABLE MARKING ATTACHMENT FOR TAPE MEASURE**5 CLAIM OF PRIORITY**

This application claims priority of provisional application Serial No. 60/220,500 filed July 25, 2000, entitled "Releasable Marking Attachment for Tape Measure", the teachings of which are incorporated herein by reference.

FIELD OF THE INVENTION

10 The present invention is generally related to the field of hardware tools, and more particularly to measuring devices including tape measures and the like.

BACKGROUND OF THE INVENTION

15 Measuring tapes, including those having recoiling mechanisms and locking mechanisms, are traditionally used by carpenters as a convenient means for measuring out predetermined distances of materials such as during construction. Typically, the tape measure includes a graduated tape including a metal catch having a 90 degree angle on the end thereof. A locking switch is adapted to secure the tape in a predetermined position during the use thereof,
20 where the release thereof allows the tape to be automatically recoiled into the housing.

Traditionally, one hand holds the tape measure while the other hand marks a material being measured with a pencil at a point corresponding to a desired graduation of the tape. This technique can be very awkward in many situations as
25 a worker finds himself needing a second hand for holding other tools or for supporting the material being measured.

There is desired an improved tape measure apparatus allowing for the selective use of a tape measure and marking therewith using only one hand,

5 freeing the worker's other hand to hold materials or other tools.

SUMMARY OF THE INVENTION

10 The present invention achieves technical advantages as an integrated recoiling tape measure with an integral marker secured thereto by a marker holder. The marker holder is uniquely designed to be attached to the side of the tape measure, and is angled in a first direction such that the marker tip extends forward of the tape holder, and is also angled laterally inward toward the tape itself and proximate the graduations thereof for easy and convenient marking of the material proximate the tape graduations.

15 The present invention preferably includes an attachment adapted to secure to the side of the tape measure, including a pencil holder securely extending a pencil forward of the holder and lateral of the tape. The attachment preferably includes a base and a detachable clip, which clip includes a tongue adapted to be received within a commensurate slit of the base. The clip has a carriage holder
20 adapted to receive a marking instrument, such as a pencil, and preferably a carpenter's pencil. The carriage holder includes a set screw for securing the position of the marking utensil with respect to the holder and thus with respect to the tape measure itself.

5 **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 shows a perspective view of a marking attachment installed on a side of a tape measure;

Figure 2 shows a perspective view of the marking attachment's two main components;

10 Figure 3 shows an exploded view of the marking attachment;

Figure 4 shows a rear view of the tape measure and marking attachment;

Figure 5 shows a side and sectional view of the base of the marking attachment;

Figure 6 shows a rear view of the base of the marking attachment;

15 Figure 7 shows a side view of the clip and cross sectional view of the holder;

Figure 8 shows a cross sectional view of the holder with two different marking instruments inside; and

Figures 9-12 show different uses of the present invention.

20

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT AND BEST MODE

A preferred embodiment of the present invention is illustrated at 10 in Figure 1 and Figure 2. Apparatus 10 is shown to include a typical tape measure 11, and an attachment 12 according to the present invention. The tape measure 11 has a recoiling graduated tape 14 with a metal catch 16 on its end. The tape

25

5 measure 10 also has a locking switch 18 adapted to selectively prevent the tape 14 from recoiling.

10 As illustrated in Figure. 2, the attachment 12 comprises two main components, a permanent base 20 adapted to secure to the side of tape measure 11 and a removable clip 22. Figure 1 shows the base 20 and clip 22 coupled together and mounted on the tape measure 11, and Figure 2 shows the clip 22 separated from the base 20. In the preferred embodiment, the base 20 and clip 22 are made of a durable plastic. However, any durable material may be used, such as a metal. The base 20 has a forward opening slot, port, or groove 24 in which a tapered tab or tongue 26 on the clip 22 may be securely inserted, as shown. Thus, the base 20 and clip 22 may be quickly snapped together or taken apart.

20 Viewing Figure 3, a marking instrument, such as a pen or pencil, and preferably a carpenter's pencil 28, is adjustably mounted on one end of the clip 22 by a carriage or holder 30. The holder 30 is angled forwardly angle "A" with respect to the normal and the rest of the clip 22 such that a tip 32 of the pencil projects forwardly away from the bottom of the tape measure 11 angle "A". The pencil is also angled laterally inward angle "B" toward the extended tape 14 (see Figure 1). This multi-angular and spaced configuration provides clearance between the holder 30 and tape measure 10 so that the attachment 12 will fit a variety of tape measures 11.

5 An inside cavity 34 of the holder 30 has a rectangular cross section with chamfered corners, much like a carpenter's pencil 28 (best shown in Figure 7 Sec. B-B). One side of the cavity 34 has a concave furrow 36 running lengthwise that may accept a variety of marking instrument shapes. Opposite from furrow 36 in the front of the holder 30 is a threaded hole 38 that accepts a set screw 40. The
10 set screw 40 adjustably engages and secures the pencil 28 in the holder 30.

 Opposite the holder 30 of the clip 22 is the tongue 26. The tongue 26 has two semi-spherical projecting bumps 42 near where the tongue 26 connects to the rest of the clip 22. These bumps 42 are aligned vertically and near the top and bottom of the tongue. When the tongue 26 is inserted into the commensurate
15 groove 24 in the base 20, the bumps 42 snap into corresponding recessed pits 46 in the base 20. The tongue 26 has opposing lips 48 on the top and bottom edges, as shown in Figure 7, that are adapted to glide inside corresponding strips or ridges 50 of the groove 24 (see Figure 5, sec. A-A).

 Adhesive strips 52 are provided such that the base 20 is securely attached
20 to a side of the tape measure 10. The adhesive strips 52 are protected temporarily by plastic backing strips 54 (Figure 3) before the attachment 12 is mounted. In this embodiment the base 20 has a generally circular shape that fits most tape measures, but it can be most any shape. Also, it has a particularly thin cross section (Figure 5, Sec. A-A) such that it does not protrude out from the tape

5 measure more than necessary. This is convenient as many tape measures are held
in a tool belt that is designed to just fit a tape measure. Excess thickness of the
base would undesirably wedge tightly in a tool belt. The base 20 also has a
smooth texture 56 on the outside so as to aid in slipping out of a tool belt.

10 Figure 4 is a view showing and revealing an extension of the groove 24
that exits the base as a debris hole 58. The debris hole 58 provides for dirt,
sawdust and the like to exit the groove 24, otherwise the tongue 26 could be
prevented from fitting all the way in the base 20.

OPERATION

15 The installation of the invention is as follows. The combined base 20 and
clip 22 (Figure 1) is attached to the tape measure 11 by first peeling off the
backing strips 54 (Figure 3) from the adhesive strips 52 and positioning the base
20 on the side of the tape measure 11. The marking instrument or pencil is
inserted into the holder 30 and secured by tightening the set screw 40.
Positioning adjustments may be made to the pencil 28 by loosening the set screw
20 40 and sliding the pencil 28 in the holder 30. The pencil 28 may be removed for
sharpening using the same method.

The removal of the clip 22 is accomplished by simply pulling it out from
holder 20. At times the user might not want or need the marking attachment 12.
Other times the pencil 28 may be used while still secured in the clip 22 and the

5 clip 22 is detached from the base 20. Also, the clip 22 may be easily detached from the tape measure 11 while it is in a tool belt or clipped on a pocket or belt.

Marking is accomplished in several ways. One-handed marking is often necessary as a worker often has to hold on to tools, a ladder or scaffold. Traditionally, one hand holds the tape measure while the other marks with a pencil. This can be very awkward in many situations a worker finds himself in.

Advantageously, using this invention, a worker can use the extended tape and marker with the same hand. The mark can be made by striking the tip 32 of the pencil on a surface near the tape 14 at the desired measurement.

Viewing Figure 9, parallel slide marking may be accomplished by first locking the switch 18 at a with the tape 14 desired length. The whole assembly 10 is held perpendicular to an edge 62 of a board or sheet 64 with the tape catch 16 held on the edge 62 of the sheet 64. While holding the assembly perpendicular, a parallel line maybe drawn by sliding the assembly along the edge 62 and pressing the pencil tip onto the surface.

20 Viewing Figure 10, circles and arcs may be made by pivoting the assembly around a point at the end of the tape. A screw or nail 66 may be used as a secured pivoting pin to hold the end of the tape 14.

Viewing Figure 11, index marking may be accomplished by locking the tape at the desired measurement. Index marking is accomplished by using an end

5 to end method, placing the tape catch 16 on the last mark made and repeating over
and over.

Viewing Figure 12, multiple parts may be marked using the tape measure
locked at the desired length.

10 Though the invention has been described with respect to a specific
preferred embodiment, many variations and modifications will become apparent
to those skilled in the art upon reading the present application. It is therefore the
intention that the appended claims be interpreted as broadly as possible in view of
the prior art to include all such variations and modifications.

5 **WE CLAIM:**

1. A tool attachment, comprising:

 a first support member adapted to secure to a tool; and

 a second support member adapted to hold a marker in a position
being angled with respect to said first support member.

10 2. The tool attachment specified in Claim 1 wherein the first support
member is adapted to attach to a recoiling tape measure.

 3. The tool attachment specified in Claim 2 wherein the first support
member is adapted to secure to a side of the tape measure.

15 4. The tool attachment specified in Claim 3 wherein said first support
member includes adhesive adapted to secure to the tape measure side.

 5. The tool attachment specified in Claim 1 wherein said first support
member extends along a first axis, and said second support member is angled
downward of said first axis an Angle A, and laterally of said first axis an angle B.

20 6. The tool attachment specified in Claim 1 wherein said second
support member includes a securing mechanism adapted to selectively secure said
marker with respect thereto.

 7. The tool attachment specified in Claim 6 wherein said securing
mechanism includes a set screw.

5 8. The tool attachment specified in Claim 1 wherein said first support member includes a slot, and said second member is adapted to be selectively and securingly received in said slot.

 9. The tool attachment specified in Claim 8 wherein said slot is adapted to extend parallel to said tape measure side when adapted thereto.

10 10. The tool attachment specified in Claim 9 wherein said second support member includes a tongue adapted to be securingly received within said slot.

 11. In combination;

 a recoiling tape measure; and

15 a first support member adapted to secure to a tool; and

 a second support member adapted to hold a marker in a position being angled with respect to said first support member.

 12. The tool attachment specified in Claim 11 wherein the first support member is adapted to attached to a recoiling tape measure.

20 13. The tool attachment specified in Claim 12 wherein the first support member is adapted to secure to a side of the tape measure.

 14. The tool attachment specified in Claim 13 wherein said first support member includes adhesive adapted to secure to the tape measure side.

5 15. The tool attachment specified in Claim 11 wherein said first support member extends along a first axis, and said second support member is angled downward of said first axis an Angle A, and laterally of said first axis an angle B.

10 16. The tool attachment specified in Claim 11 wherein said second support member includes a securing mechanism adapted to selectively secure said marker with respect thereto.

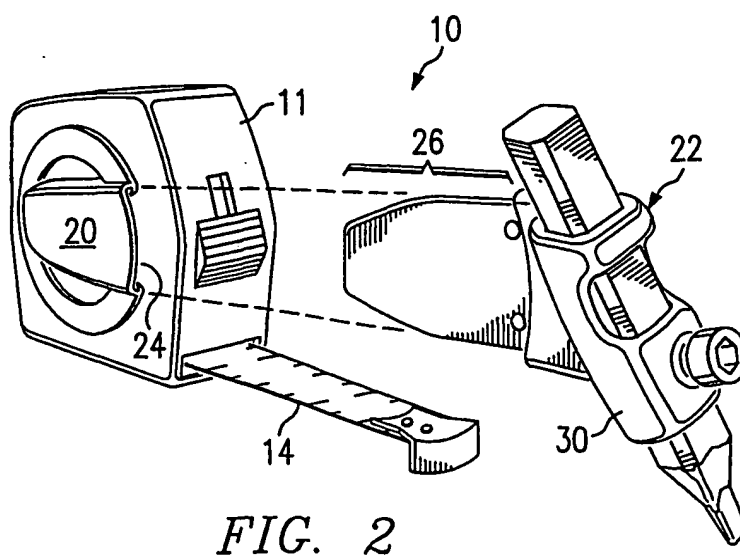
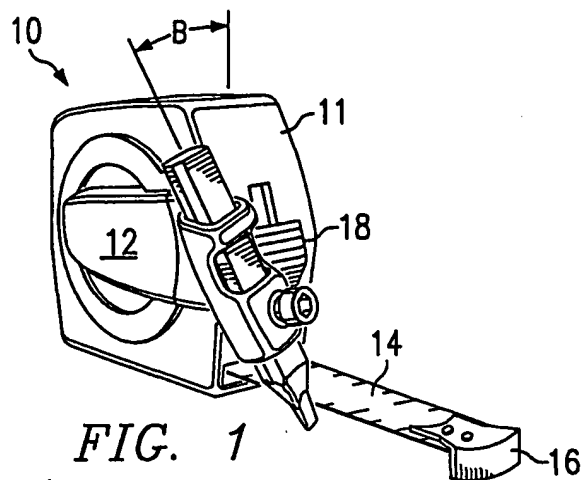
 17. The tool attachment specified in Claim 16 wherein said securing mechanism includes a set screw.

15 18. The tool attachment specified in Claim 11 wherein said first support member includes a slot, and said second member is adapted to be selectively and securingly received in said slot.

 19. The tool attachment specified in Claim 19 wherein said slot is adapted to extend parallel to said tape measure side when adapted thereto.

20 20. The tool attachment specified in Claim 11 wherein said second support member includes a tongue adapted to be securingly received within said slot.

1/4



2/4

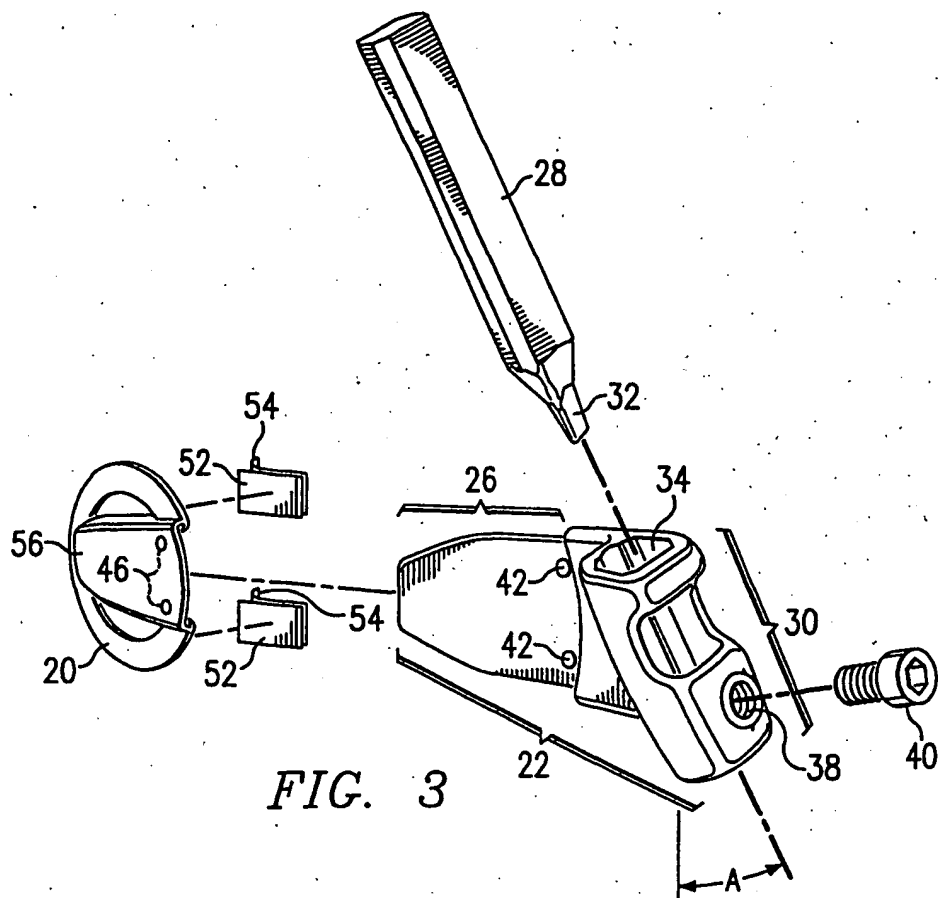


FIG. 3

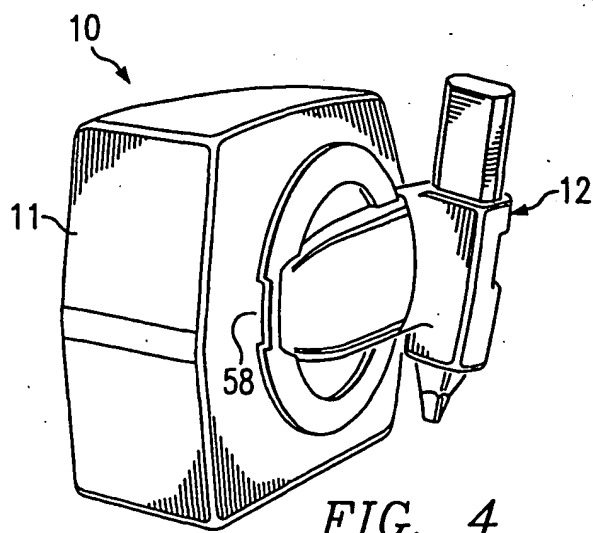


FIG. 4

3/4

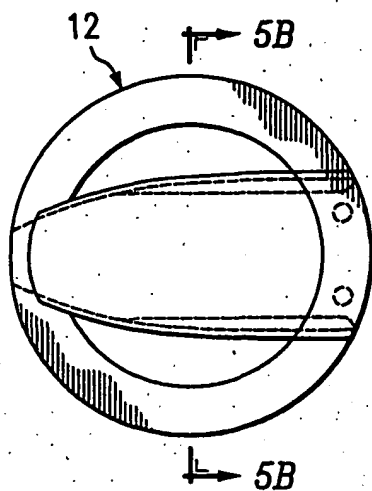


FIG. 5A

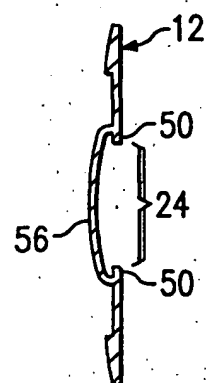


FIG. 5B

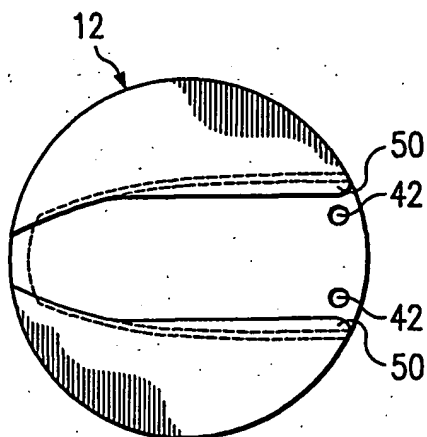


FIG. 6

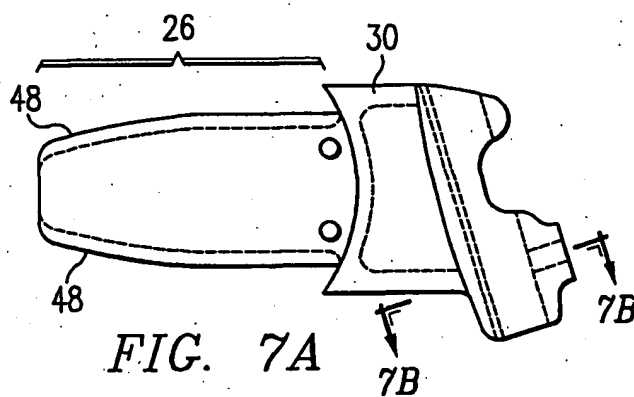


FIG. 7A

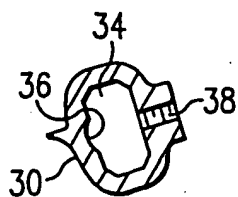


FIG. 7B

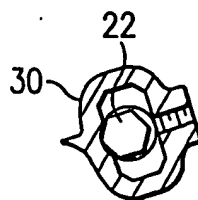
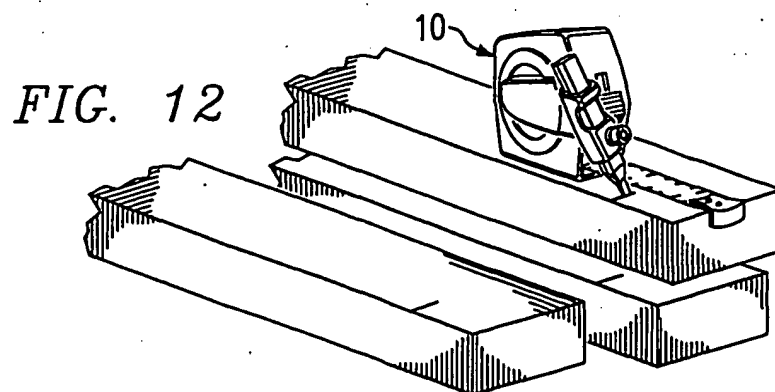
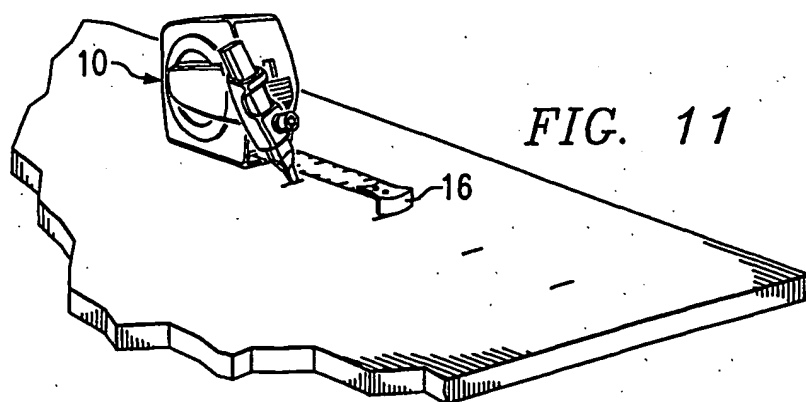
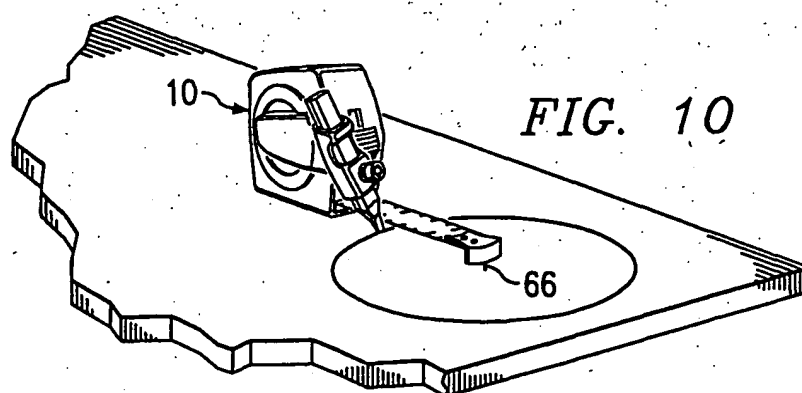
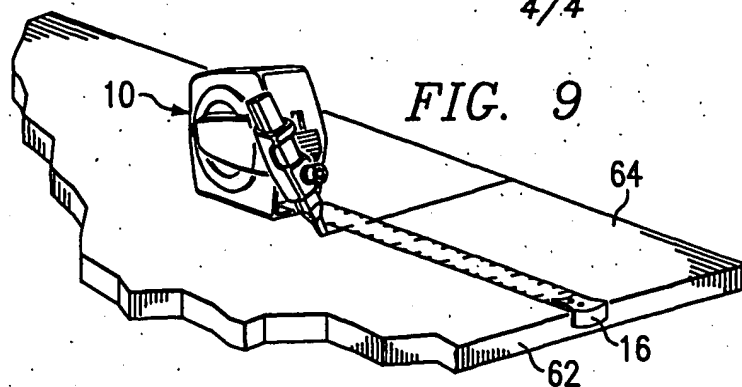


FIG. 8

4/4



INTERNATIONAL SEARCH REPORT

 Int'l Application No
 PCT/US 01/22016

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 601B3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 601B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 262 211 A (BECKETT NORMAN P) 26 July 1966 (1966-07-26) column 3 -column 7; figures 8-11	1-20
A	US 3 148 455 A (ACIEGO ALFONSO B) 15 September 1964 (1964-09-15) column 2 -column 3	1-20
A	US 4 296 554 A (HAMMERSTROM EVERETT A) 27 October 1981 (1981-10-27) claims 1-4	1
A	US 5 295 308 A (MOSHER FRANK N ET AL) 22 March 1994 (1994-03-22) column 3 -column 4	1
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

10 December 2001

Date of mailing of the international search report

19/12/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Dietrich, A

INTERNATIONAL SEARCH REPORT

Int l Application No

PCT/US 01/22016

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	WO 01 11309 A (INVENTURES PRODUCT DEV INC) 15 February 2001 (2001-02-15) claims 1-42	1-20
A,P	WO 00 60306 A (KHACHATOORIAN ZAREH ;OLYMPIA GROUP INC (US)) 12 October 2000 (2000-10-12) claims 1-30	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/22016

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3262211	A	26-07-1966	NONE	
US 3148455	A	15-09-1964	NONE	
US 4296554	A	27-10-1981	NONE	
US 5295308	A	22-03-1994	NONE	
WO 0111309	A	15-02-2001	AU WO	7628900 A 0111309 A1
				05-03-2001 15-02-2001
WO 0060306	A	12-10-2000	US AU WO	6276071 B1 3887200 A 0060306 A2
				21-08-2001 23-10-2000 12-10-2000